

REMARKS

The Office Action dated February 8, 2008 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-6, 11-21, 23, and 26-29 have been amended to more particularly point out and distinctly claim the subject matter of the invention. Claims 7-10 and 24-25 have been cancelled without prejudice or disclaimer. Claims 30-34 have been added. No new matter has been added. Therefore, claims 1-6, 11-23, and 26-34 are currently pending in the application and are respectfully submitted for consideration.

The Office Action rejected claim 13 under 35 U.S.C. §112, second paragraph as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Office Action took the position that “claim 13 recites a sub-terminal in line 1, then later recites a sub-terminal in line 3,” and that “this language suggests that there are two sub-terminals in the wireless telecommunication system.” Claim 13 has been amended to recite “the apparatus,” rather than “the sub-terminal.” Applicants respectfully submit that this amendment moots the rejection, and respectfully requests that the rejection be withdrawn.

The Office Action rejected claims 1-17, 23, 25, 27, and 29 under 35 U.S.C. §102(e) as allegedly anticipated by Ratert, *et al.* (U.S. Patent Publication No. 2004/0142684) (“Ratert”). The Office alleged that Ratert discloses or suggests every claim feature recited in claims 1-17, 23, 25, 27, and 29. With respect to claims 7-10 and

25, said claims have been cancelled, and Applicants respectfully submit that said cancellation moots the rejection. With respect to the remaining claims, the rejection is respectfully traversed for at least the following reasons.

Claim 1, upon which claims 2-5 and 22-23 are dependent, recites a method, which includes connecting a subscriber terminal of a wireless telecommunications system to an infrastructure of the wireless telecommunications system over a wireless interface, the subscriber terminal holding a subscriber identity in the wireless telecommunications system. The method further includes connecting the subscriber terminal to at least one sub-terminal over a proximity wireless interface, the at least one sub-terminal using the subscriber identity of the subscriber terminal. The method further includes requesting a radio link from the subscriber terminal, the radio link being directed from the infrastructure to the at least one sub-terminal. The method further includes generating signaling parameters for controlling the radio link, and communicating at least one of the signaling parameters between the at least one sub-terminal and the infrastructure via the subscriber terminal.

Claim 6 recites a system which includes a subscriber terminal and at least one sub-terminal. The subscriber terminal includes a connecting unit configured to connect the subscriber terminal to a infrastructure of a wireless telecommunications system and a subscriber identity unit configured to hold a subscriber identity of the subscriber terminal in the wireless telecommunications system. The at least one sub-terminal uses the subscriber identity of the subscriber terminal and includes a receiving unit configured to

provide a radio link directed from the infrastructure to the at least one sub-terminal, the radio link being controlled on the basis of signaling parameters. The subscriber terminal comprises a requesting unit operationally connected to the connecting unit, configured to request the radio link. The system comprises a signaling unit operationally connected to the connecting unit, configured to communicate at least one of the signaling parameters between the subscriber terminal and the infrastructure. The system comprises a proximity signaling unit operationally connected to the signaling unit, configured to communicate the at least one of the signaling parameters between the subscriber terminal and the at least one sub-terminal over a proximity wireless interface.

Claim 11, upon which claims 12 and 26-27 are dependent, recites an apparatus, which includes a connecting unit configured to connect the apparatus to an infrastructure of the wireless telecommunications system. The apparatus further includes a subscriber identity unit configured to hold a subscriber identity of the apparatus in the wireless telecommunications system. The apparatus further includes a requesting unit operationally connected to the connecting unit, configured to request a radio link directed from the infrastructure to at least one sub-terminal, the at least one sub-terminal using the subscriber identity of the apparatus, the radio link being controlled on the basis of signaling parameters. The apparatus further includes a proximity signaling unit configured to communicate at least one of the signaling parameters with the at least one sub-terminal over a proximity wireless interface, and a signaling unit operationally connected to the connecting unit and the proximity signaling unit, configured to

communicate the at least one of the signaling parameters between the apparatus and the infrastructure.

Claim 13, upon which claims 14-17 and 28 are dependent, recites an apparatus, which includes a receiving unit configured to provide a radio link directed from an infrastructure of the wireless telecommunication system, to the apparatus, the apparatus being operationally connected to the infrastructure and holding a subscriber identity in the wireless telecommunications system, the apparatus using the subscriber identity of a subscriber terminal and, the radio link being controlled on the basis of signaling parameters communicated between the subscriber terminal and the infrastructure, the radio link being requested by the subscriber terminal. The apparatus further includes a proximity signaling unit configured to communicate at least some of the signaling parameters between the subscriber terminal and the apparatus over a proximity wireless interface.

Claim 30 recites an apparatus, which includes connecting means for connecting the apparatus to an infrastructure of the wireless telecommunications system. The apparatus further includes subscriber identity means for holding a subscriber identity of the apparatus in the wireless telecommunications system. The apparatus further includes requesting means for requesting a radio link directed from the infrastructure to at least one sub-terminal, the at least one sub-terminal using the subscriber identity of the apparatus, the radio link being controlled on the basis of signaling parameters. The apparatus further includes proximity signaling means for communicating at least one of

the signaling parameters with the at least one sub-terminal over a proximity wireless interface, and signaling means for communicating the at least one of the signaling parameters between the apparatus and the infrastructure.

Claim 31 recites an apparatus, which includes receiving means for providing a radio link directed from an infrastructure of the wireless telecommunication system, to the apparatus, the apparatus being operationally connected to the infrastructure and holding a subscriber identity in the wireless telecommunications system, the apparatus using the subscriber identity of a subscriber terminal and, the radio link being controlled on the basis of signaling parameters communicated between the subscriber terminal and the infrastructure, the radio link being requested by the subscriber terminal. The apparatus further includes proximity signaling means for communicating at least some of the signaling parameters between the subscriber terminal and the apparatus over a proximity wireless interface.

Claim 33, upon which claim 34 is dependent, recites a computer program embodied on a computer medium, for controlling a computer to perform a method. The method includes connecting a subscriber terminal of a wireless telecommunications system to an infrastructure of the wireless telecommunications system over a wireless interface, the subscriber terminal holding a subscriber identity in the wireless telecommunications system. The method further includes connecting the subscriber terminal to at least one sub-terminal over a proximity wireless interface, the at least one sub-terminal using the subscriber identity of the subscriber terminal. The method further

includes requesting a radio link from the subscriber terminal, the radio link being directed from the infrastructure to the at least one sub-terminal. The method further includes generating signaling parameters for controlling the radio link, and communicating at least one of the signaling parameters between the at least one sub-terminal and the infrastructure via the subscriber terminal.

Thus, according to embodiments of the invention, a mobile terminal's capabilities are extended by the use of a sub-terminal, which does not require a subscriber identity in a network. The signaling between the sub-terminal and the infrastructure is at least partially routed via the subscriber terminal, thus releasing radio resources for data transfer. Furthermore, the sub-terminal is capable of being used without a transmitter, simplifying the structure of the sub-terminal and reducing costs of manufacture.

As will be discussed below, Ratert fails to disclose or suggest all of the elements of the claims, and therefore fails to provide the advantages and features discussed above.

Ratert generally discloses a method and system of connecting a first communication device to a network using information contained in a second communication device already connected the network. The method includes acquiring, at the first communication device, at least some of the information contained in the second communication device. The method further includes acquiring, at the first communication device, connection parameters stored in the second communication device, and using the acquired parameters to connect the first communication device to the network. (see Ratert at paragraph 0008-0009).

Applicants respectfully submit that Ratert fails to disclose, teach, or suggest, all of the elements of the present claims. For example, Ratert fails to disclose, teach, or suggest, at least, “requesting a radio link from the subscriber terminal, the radio link being directed from the infrastructure to the at least one sub-terminal,” as recited in claim 1, and similarly recited in claims 6, 11, 30, and 33; “a receiving unit configured to provide a radio link directed from an infrastructure of the wireless telecommunication system, to the apparatus,” as recited in claim 13, and similarly recited in claim 31; and “communicating at least one of the signaling parameters between the at least one sub-terminal and the infrastructure via the subscriber terminal,” as recited in claim 1, and similarly recited in claims 6, 11, 13, 30-31, and 33.

Applicants respectfully submit that Ratert fails to disclose requesting a radio link or a receiving unit configured to provide a radio link. As discussed above, Ratert discloses a method and system of connecting a first communication device to a network using information contained in a second communication device already connected the network. Applicants respectfully submit that Ratert discloses a solution where a user has two cellular phones, but only one of them has a subscriber identity module (SIM). Ratert teaches a solution where the connection established with the first phone is moved to the second phone, by transferring SIM and connection information from the first phone to the second phone. However, Ratert does not disclose, or suggest, the features of independent claims 1, 6, 11, 13, 30-31, and 33.

Specifically, Ratert discloses a system including a pair of radiotelephones 200 and 208, which are capable of communication with a telecommunication network 216. Radiotelephone 200 includes a subscriber identification module (SIM) 206, while radiotelephone 208 includes a virtual SIM 214. (see Ratert at paragraph 0019; Figure 2). In the first embodiment, Ratert discloses a radio link between radiotelephone 200 and the telecommunication network 216. However, Ratert does not disclose, or suggest, that the radiotelephone 200 makes any steps for requesting a radio link between radiotelephone 208 and the telecommunication network 216. Instead, radiotelephone 200 transfers SIM and connection information from radiotelephone 208 to the telecommunication network 216. Radiotelephone 216 sets up the connection between the telecommunication network 216 and radiotelephone 208. (see Ratert at paragraphs 0019-0022; Figure 2).

In the second embodiment, Ratert discloses the same radiotelephones 200 and 208, but also discloses the transfer of information contained in the SIM of radiotelephone 200 to radiotelephone 208 during a call. In the second embodiment, radiotelephone 200 has a connection to the telecommunication network 216, which is an ongoing call. A radio link request is not transmitted. Instead, radiotelephone 200 merely sends a hold request to the telecommunication network 216. Radiotelephone 200 subsequently transfers SIM and connection information to radiotelephone 208. Radiotelephone 208 then sends a hold release message to the telecommunication network 216, which sets up the connection between the telecommunication network 215 and radiotelephone 208. (see Ratert at paragraph 0023; Figure 3). Thus, in this embodiment, a separate radio link is not formed,

as the other phone merely continues the use of the radio link of the first phone. Thus, there is no disclosure, or suggestion, of requesting a radio link.

Furthermore, Applicants respectfully submit that Ratert fails to disclose, or suggest, communicating signaling parameters. The Office Action takes the position that the parameters controlling the radio link of radiotelephone 208 disclose “the signaling parameters” as recited in independent claims 1, 6, 11, 13, 30-31, and 33. (see Office Action at pages 3-4, “Ratert teaches generating signaling parameters for controlling the radio link”). As discussed above, Ratert teaches that radiotelephone 200 takes no active part when a radio link between radiotelephone 208 and the telecommunication network 216 is set up. None of the communication relating to the radio link of radiotelephone 208 is communication between radiotelephone 200 and the telecommunication network 216. The only communication radiotelephone 200 performs is terminating (or putting to hold) the radio link of radiotelephone 200. Furthermore, no signaling parameters are routed via radiotelephone 200 in Ratert. In other words, radiotelephone 208 does not send any signaling parameters to radiotelephone 200, to be subsequently sent from radiotelephone 200 to the telecommunication network 216. As the figures of Ratert show, the only information transfer between radiotelephone 200 and radiotelephone 208 is the transmission of SIM and connection information. (see Ratert at Figures 1-3).

Therefore, for at least the reasons discussed above, Ratert fails to disclose, teach, or suggest, all of the elements of independent claims 1, 6, 11, 13, 30-31, and 33. For the reasons stated above, Applicants respectfully request that this rejection be withdrawn.

Claims 2-5 and 23 depend upon independent claim 1. Claims 12 and 27 depend upon independent claim 11. Claims 14-17 depend upon independent claim 13. Claim 34 depends upon independent claim 33. Thus, Applicants respectfully submit that claims 2-5, 12, 14-17, and 27 should be allowed for at least their dependence upon independent claims 1, 11, 13, and 33, respectively, and for the specific elements recited therein.

The Office Action appeared to take the position that claim 29 depends upon claim 13. (see Office Action at page 7, “Regarding claim 29 Rater teaches a device as recited in claim 23” (whereas claim 23 depends upon claim 13)). However, claim 29 depends upon claim 18, not claim 13. (see claim 18). Thus, Applicants will address the rejection of claim 29, when it addresses the rejection of claim 18.

The Office Action rejected claims 18-21 under 35 U.S.C. §103(a) as being allegedly unpatentable as obvious over Ratert in view of Cao, *et al.* (U.S. Patent No. 6,975,858) (“Cao”). The Office Action took the position that Ratert discloses all the elements of the claims with the exception of “a radio resource control system for controlling resources in the wireless telecommunication system,” with respect to claim 18. The Office Action then cited Cao as allegedly curing the deficiencies of Ratert. (see Office Action at page 9, last five lines). The rejection is respectfully traversed for at least the following reasons.

Claim 18, upon which claims 19-21 and 29 are dependent, recites an apparatus, which includes an access control unit configured to control access of at least one sub-terminal to an infrastructure of a wireless telecommunications system on the basis of an

access request from a subscriber terminal of the wireless telecommunications system, the subscriber terminal being operationally connected to the infrastructure and the subscriber terminal holding the subscriber identity in the wireless telecommunications system, the at least one sub-terminal using the subscriber identity of the subscriber terminal. The apparatus further includes a controlling unit operationally connected to the access control unit, configured to control a radio link directed from the infrastructure to the at least one sub-terminal, the radio link being controlled on the basis of signaling parameters. The apparatus further includes a signaling unit configured to communicate at least one of the signaling parameters between the infrastructure and the subscriber terminal, the at least one of the signaling parameters being communicated between the subscriber terminal and the at least one sub-terminal over a proximity wireless interface.

Claim 32 recites an apparatus, which includes access control means for controlling access of at least one sub-terminal to an infrastructure of a wireless telecommunications system on the basis of an access request from a subscriber terminal of the wireless telecommunications system, the subscriber terminal being operationally connected to the infrastructure and the subscriber terminal holding the subscriber identity in the wireless telecommunications system, the at least one sub-terminal using the subscriber identity of the subscriber terminal. The apparatus further includes controlling means for controlling a radio link directed from the infrastructure to the at least one sub-terminal, the radio link being controlled on the basis of signaling parameters. The apparatus further includes signaling means for communicating at least one of the signaling parameters between the

infrastructure and the subscriber terminal, the at least one of the signaling parameters being communicated between the subscriber terminal and the at least one sub-terminal over a proximity wireless interface.

As will be discussed below, the combination of Ratert and Cao fails to disclose or suggest all of the elements of the claims, and therefore fails to provide the advantages and features discussed above.

The description of Ratert, as described above, is incorporated herein. Cao generally discloses a method and apparatus for reducing signaling load in mobile telecommunications networks. In an Universal Mobile Telephone System, semi-static uplink and downlink connection parameters relating to the frequently-used services of voice, fax and web browsing are intermittently broadcast to mobile user equipment which stores the parameters. When a mobile requests one of those services, the relevant dynamic parameters are sent over the radio interface, and the mobile is asked whether it has in its store the relevant parameters for the requested service. If it does, the call is set up. If it does not, the semi-static parameters relevant to the requested service are sent to the user equipment. (see Cao at Abstract).

Applicants respectfully submit that Ratert and Cao, whether considered individually or in combination fail to disclose, teach, or suggest, all of the elements of the present claims. For example, the combination of Ratert and Cao fails to disclose, teach, or suggest, at least, “access control unit configured to control access of at least one sub-terminal to an infrastructure of a wireless telecommunications system on the basis of an

access request from a subscriber terminal of the wireless telecommunications system,” as recited in claim 18, and similarly recited in claim 32.

As discussed above, Ratert fails to disclose sending an access request, because Ratert fails to disclose radiotelephone 200 sending any request relating to the radio link between radiotelephone 208 and the telecommunication network 216. As discussed above, Ratert does not disclose any communication between the radiotelephones other than the transmission of SIM and connection information. Furthermore, Cao does not cure the deficiencies of Ratert, as Cao fails to disclose, or suggest, “access control unit configured to control access of at least one sub-terminal to an infrastructure of a wireless telecommunications system on the basis of an access request from a subscriber terminal of the wireless telecommunications system,” as recited in claim 18, and similarly recited in claim 32.

Therefore, for at least the reasons discussed above, the combination of Cao and Ratert fails to disclose, teach, or suggest, all of the elements of independent claims 18 and 32. For the reasons stated above, Applicants respectfully request that this rejection be withdrawn.

Claims 19-21 and 29 depend upon independent claim 18. Thus, Applicants respectfully submit that claims 19-21 and 29 should be allowed for at least their dependence upon independent claim 18, and for the specific elements recited therein.

The Office Action rejected claims 22, 24, 26, and 28 under 35 U.S.C. §103(a) as being allegedly unpatentable as obvious over Ratert in view of deTorbal (U.S. Patent

Publication No. 2004/0058678) (“deTorbal”). The Office Action took the position that Ratert discloses all the elements of the claims with the exception of “generating a handover request to the sub-terminal in the subscriber terminal in order to perform simultaneous handovers of the subscriber terminal and the sub-terminal.” The Office Action then cited deTorbal as allegedly curing the deficiencies of Ratert. With respect to claim 24, claim 24 has been cancelled, and said cancellation moots the rejection. With respect to the remaining claims, the rejection is respectfully traversed for at least the following reasons.

The description of Ratert, as discussed above, is incorporated herein. deTorbal generally discloses a method and apparatus for facilitating handovers for a group of mobile radios. Advance handover notice is given to a target base station of a group of mobile radio connections that will be handed over to the target base station from a current serving base station. The advance notice permits the target base station to reserve resources and prepare for the handovers of the mobile radio connections. (see deTorbal at Abstract).

Claims 22, 26, and 28 depend upon independent claims 1, 11, and 13, respectively. As discussed above, Ratert does not disclose, teach, or suggest all of the elements of independent claims 1, 11, and 13. Furthermore, deTorbal does not cure the deficiencies in Ratert, as deTorbal also does not disclose, teach, or suggest, at least, “requesting a radio link from the subscriber terminal, the radio link being directed from the infrastructure to the at least one sub-terminal,” as recited in claim 1, and similarly recited


in claim 11; “a receiving unit configured to provide a radio link directed from an infrastructure of the wireless telecommunication system, to the apparatus,” as recited in claim 13; and “communicating at least one of the signaling parameters between the at least one sub-terminal and the infrastructure via the subscriber terminal,” as recited in claim 1, and similarly recited in claim 11. Thus, the combination of Ratert and deTorbal does not disclose, teach, or suggest all of the elements of claims 22, 26, and 28. Additionally, claims 22, 26, and 28 should be allowed for at least their dependence upon independent claims 1, 11, and 13, and for the specific elements recited therein.

For at least the reasons discussed above, Applicants respectfully submit that the cited prior art references fails to disclose or suggest all of the elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 1-6, 11-23, and 26-34 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,


Majid AlBassam
Registration No. 54,749

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Tysons Corner, Virginia 22182-2700
Telephone: 703-720-7800
Fax: 703-720-7802

KMM:dlh

Enclosures: Additional Claim Fee Transmittal
Check No. 018563